

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims:

LISTING OF CLAIMS

1 - 33. (cancelled)

34. (previously presented) An atherectomy device comprising:

a catheter having a proximal and a distal end and a lumen therebetween;

a support structure in the lumen adjacent the distal end;

one or more optical conduits in the catheter, each having a distal end supported by the support structure;

one or more magnetic members disposed in the distal end of the catheter whereby the distal end is oriented by the one or more magnetic members that align with the direction of an externally applied magnetic field; and

wherein the one or more optical conduit in the distal end are rotatable within the support structure.

35. (previously presented) An atherectomy device comprising:

a catheter having a proximal and a distal end and a lumen therebetween;

a support structure in the lumen adjacent the distal end;

one or more optical conduits in the catheter, each having a distal end supported by the support structure;

one or more magnet members disposed in the distal end of the catheter that orient the distal end to align with an applied magnetic field, whereby the distal end is oriented by changing the direction of the externally applied magnetic field to cause the magnet members to align relative to the magnetic field; and

wherein the one or more optical conduit distal in the distal end are rotatable within the support structure within the catheter.

36. (previously presented) The device of claim 35, wherein the support structure comprises the one or more magnetic members.
37. (previously presented) The device of claim 36, wherein the support structure comprises a sheath.
38. (previously presented) The device of claim 37, wherein the device comprises a laser ablation tool.
39. (previously presented) An atherectomy device comprising:
 - a catheter having a proximal and a distal end and a lumen therebetween;
 - a support structure in the lumen adjacent the distal end;
 - one or more optical conduits in the catheter, each having a distal end supported by the support structure;
 - one or more magnetic members disposed in the distal end of the catheter, whereby the distal end is oriented by the one or more magnetic members that align with the direction of an externally applied magnetic field;
 - wherein the one or more magnet members are positioned within the catheter and are rotatable within the catheter.
40. (previously presented) The device of claim 39, further comprising an ablation member at the catheter distal end.
41. (previously presented) The device of claim 40, wherein the one or more magnet members are comprised by the support structure.
42. (previously presented) The device of claim 41, wherein the support structure comprises a passage for a guidewire.
43. (previously presented) The device of claim 39, wherein at least one optical conduit is connected to an optical imaging system for acquiring an image of the interior circumference of a vessel in which the device is located, and at least one optical conduit is connected to a remote optical laser energy source for conducting ablating laser energy to the distal end of the device.

44. (previously presented) The device of claim 39 wherein at least one optical conduit comprises an optical fiber having a beveled distal end facing generally radially outwardly for imaging the vessel in which the device is located.
45. (previously presented) The atherectomy device of claim 34, further comprising an electrode having an opening therein disposed at the distal end of the catheter, and a conduit that slidably extends through the lumen and the opening in the electrode to establish an electrical connection with the electrode, wherein the conduit disposed in the catheter's lumen is configured to remain in place during retraction of the catheter.
46. (previously presented) The atherectomy device of claim 35, further comprising an electrode having an opening therein disposed at the distal end of the catheter, and a conduit that slidably extends through the lumen and the opening in the electrode to establish an electrical connection with the electrode, wherein the conduit disposed in the catheter's lumen is configured to remain in place during retraction of the catheter.
47. (previously presented) The atherectomy device of claim 34, wherein the one or more magnetic members are sized and shaped so that they tend to align the distal end of the catheter with an externally applied magnetic field.
48. (previously presented) The atherectomy device of claim 35, wherein the one or more magnetic members are sized and shaped so that they tend to align the distal end of the catheter with an externally applied magnetic field.